A0

WPI Acc No: 1996-400066/199640
XRAM Acc No: C96-125604
Gas assist injection moulding - with cooling medium transfer via direct injection through part cavity.
Patent Assignee: ANONYMOUS (ANON)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
RD 388006	A	19960810	RD 96388006	A	19960720	199640	B

Priority Applications (No Type Date): RD 96388006 A 19960720
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
RD 388006	A			B29D-000/00	

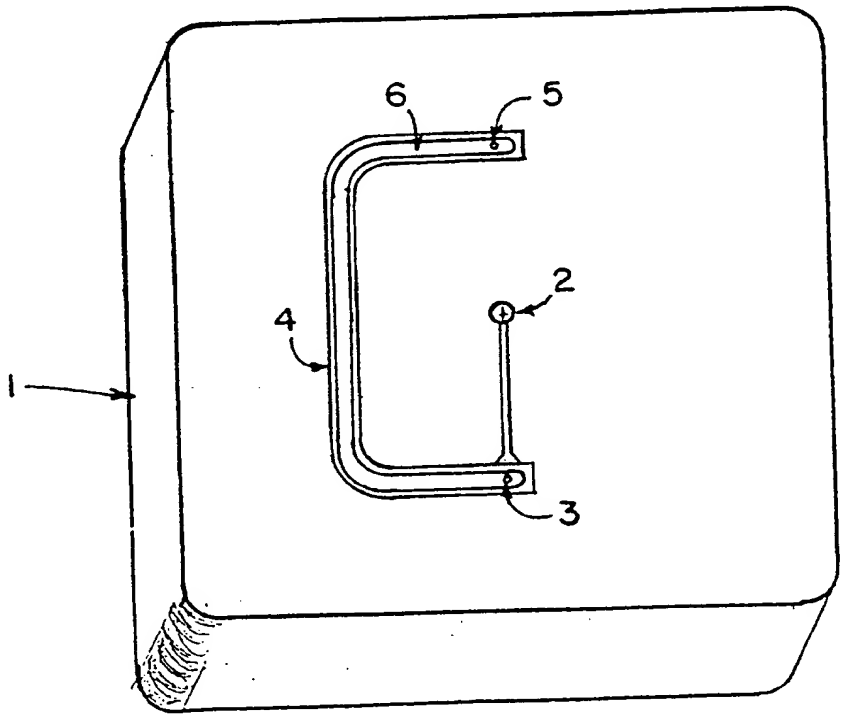
Abstract (Basic): RD 388006 A

A variant of the gas assist injection molding process consists of injecting plastic melt into the injection mould (1) at a specified location (2). After plastic is injected and the primary gas has been introduced (3) to fill and pack the part cavity (4), a cooling gas is introduced directly into the gas channel at a point (5) near the end of melt flow. The cooling gas enters the hollow gas channel (6) removing heat from the plastic melt as it travels through the hollow channel toward the primary gas inlet point (3). Introduction of cooling gas at a pressure higher than that of the existent primary gas occurs during the gas hold phase of a conventional gas assist molding cycle. The cooling/primary gas mixture remains in part cavity until sufficient material cure is achieved in order for gas venting to occur without disturbing part integrity. The primary/cooling gas mixture is then exhausted to the atmosphere through the primary gas introduction point (3). Cooling gas is immediately re-introduced in a continuous fashion through (5) and exhausted through (3) until sufficient material cooling has occurred. The end effect is a significant reduction in overall molding process cycle time.

Dwg.0/1

38806
Gas Assist Injection Molding with Cooling Medium Transfer via Direct Injection Through Part Cavity

A variant of the gas assist injection molding process consists of injecting plastic melt into the injection mold (1) at a specified location (2). After plastic is injected and the primary gas has been introduced (3) to fill and pack the part cavity (4), a cooling gas is introduced directly into the gas channel at a point (5) near the end of melt flow. The cooling gas enters the hollow gas channel (6) removing heat from the plastic melt as it travels through the hollow channel toward the primary gas inlet point (3). Introduction of cooling gas at a pressure higher than that of the existent primary gas occurs during the gas hold phase of a conventional gas assist molding cycle. The cooling/primary gas mixture remains in part cavity until sufficient material cure is achieved in order for gas venting to occur without disturbing part integrity. The primary/cooling gas mixture is then exhausted to the atmosphere through the primary gas introduction point (3). Cooling gas is immediately re-introduced in a continuous fashion through (5) and exhausted through (3) until sufficient material cooling has occurred. The end effect is a significant reduction in overall molding process cycle time.



Disclosed Anonymously
38806
Aug 1996.